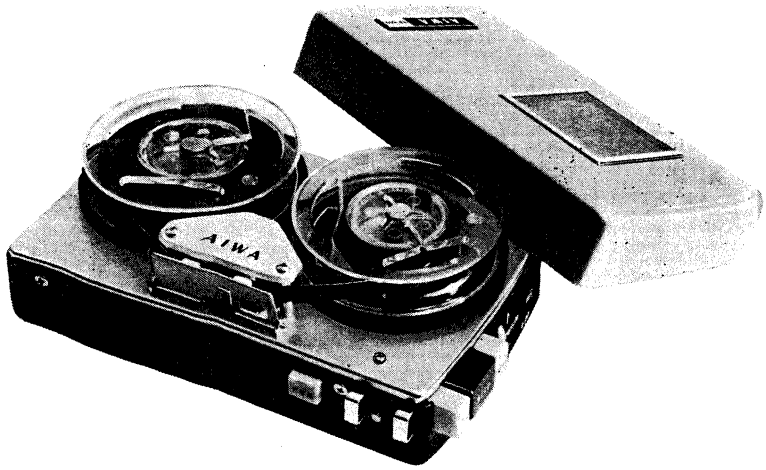


AIWA

MODEL TP-60R

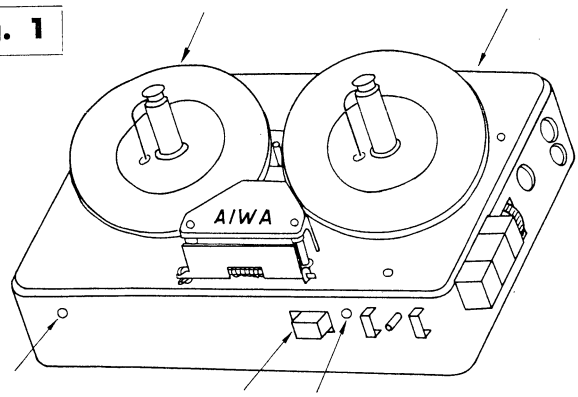
SERVICE MANUAL

AIWA CO., LTD. TOKYO, JAPAN

1. Disassembly

a. After removal of batteries, unfasten four set screws, two on each side of the case as indicated by the arrow mark in Fig. 1. Then, pressing the record button located on the side (also arrow-marked), push the tape deck out of the case in such a way that the portion where the battery compartment is located may come out first (see Fig. 1).

Fig. 1



2. The Set Fails to Operate Completely

a. Defective contact of the remote jack: (Fig. 2)

The remote jack is the smallest of the three jacks coming in a row. The set will not operate when this jack fails to make contact with each other at the point indicated by the arrow mark in Fig. 2. The symptom typical of this trouble is that whereas the set operates with the microphone plug inserted into this jack and the remote switch turned on, the set fails to operate when the plug is pulled off. Check if the lead wire is broken.

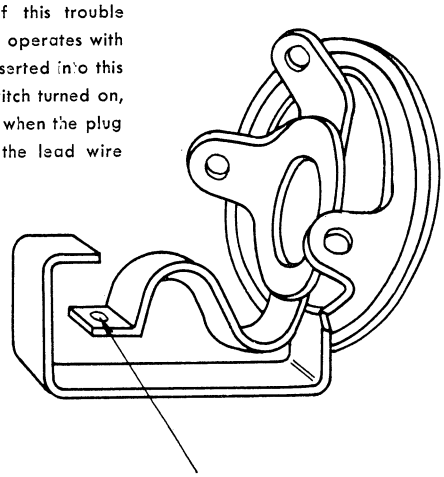
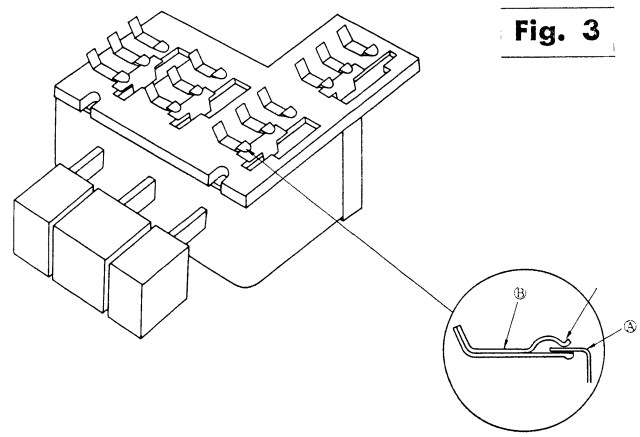


Fig. 2

b. Defective contact of push button (Fig. 3):

Such occurs when the segment plates, A and B do not come in contact with each other even in Play or Rewind position. To remedy this defect, bend B somewhat in the direction indicated by the arrow mark in Fig. 3.

Fig. 3



c. Defective motor (Fig. 4):

If the reel platform does not revolve in Play or Rewind position while yet all other parts are found normal, it indicates the defective motor, which should be replaced.

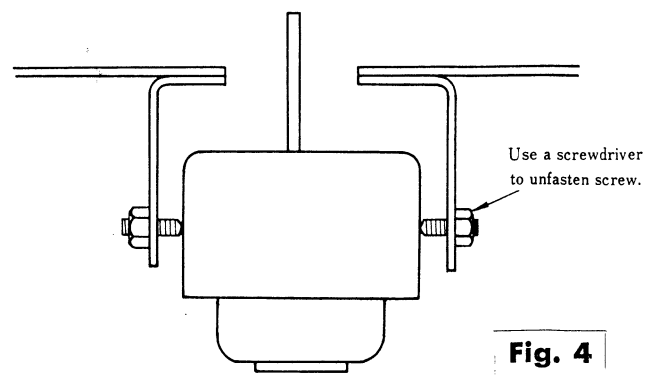


Fig. 4

d. No operation on battery power supply. Or very slow in revolution speed:

The above symptom indicates the worn-out or excessively weakened battery, which must be replaced immediately.

3. The Set Operates but Partially Defective

a. In Play position, it forwards tape but fluctuates in revolution speed : (Fig. 5)

The above results from the weakened spring pressure of the pressure spring working the takeup motor, so that the spring should be adjusted as indicated by the dotted line in Fig. 5.

b. In Play position, incomplete rewinding while tape forwarding is good : (Also see Fig. 5)

The coiled spring pulling the motor lacks in enough spring tension. To remedy this trouble, cut the spring short by 1-2t.

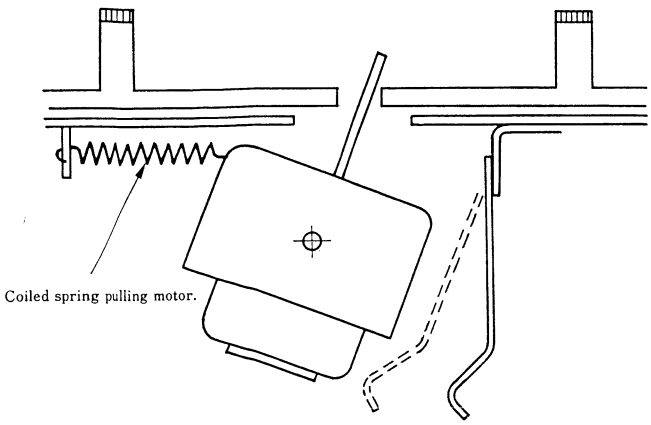


Fig. 5

4. Defective Recording and Reproduction while the Tape Mechanism Normally Functions

a. Defective microphone :

Replace the microphone.

b. Defective contact of jack (Fig. 6) :

A normal jack should be such that①' and②' are in contact with each other a plug is not inserted therein. When a plug is inserted,①' and②' become separated, ① and ①come in contact with each other and①' and ③ separated.

c. Lead wire around jack short-circuited or broken :

If the lead wire short-circuits, remove the cause therefor. If the lead wire is broken, fix again it by soldering.

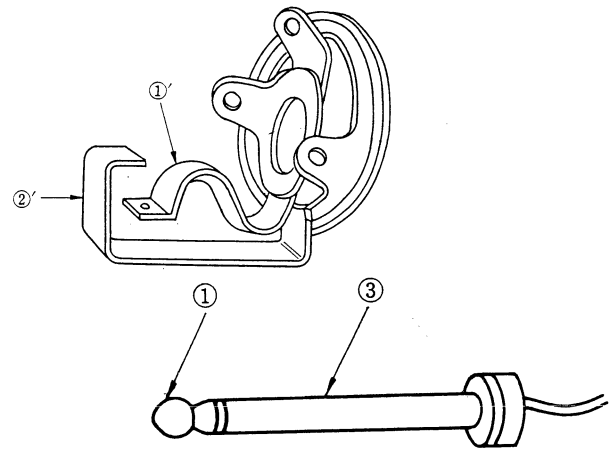
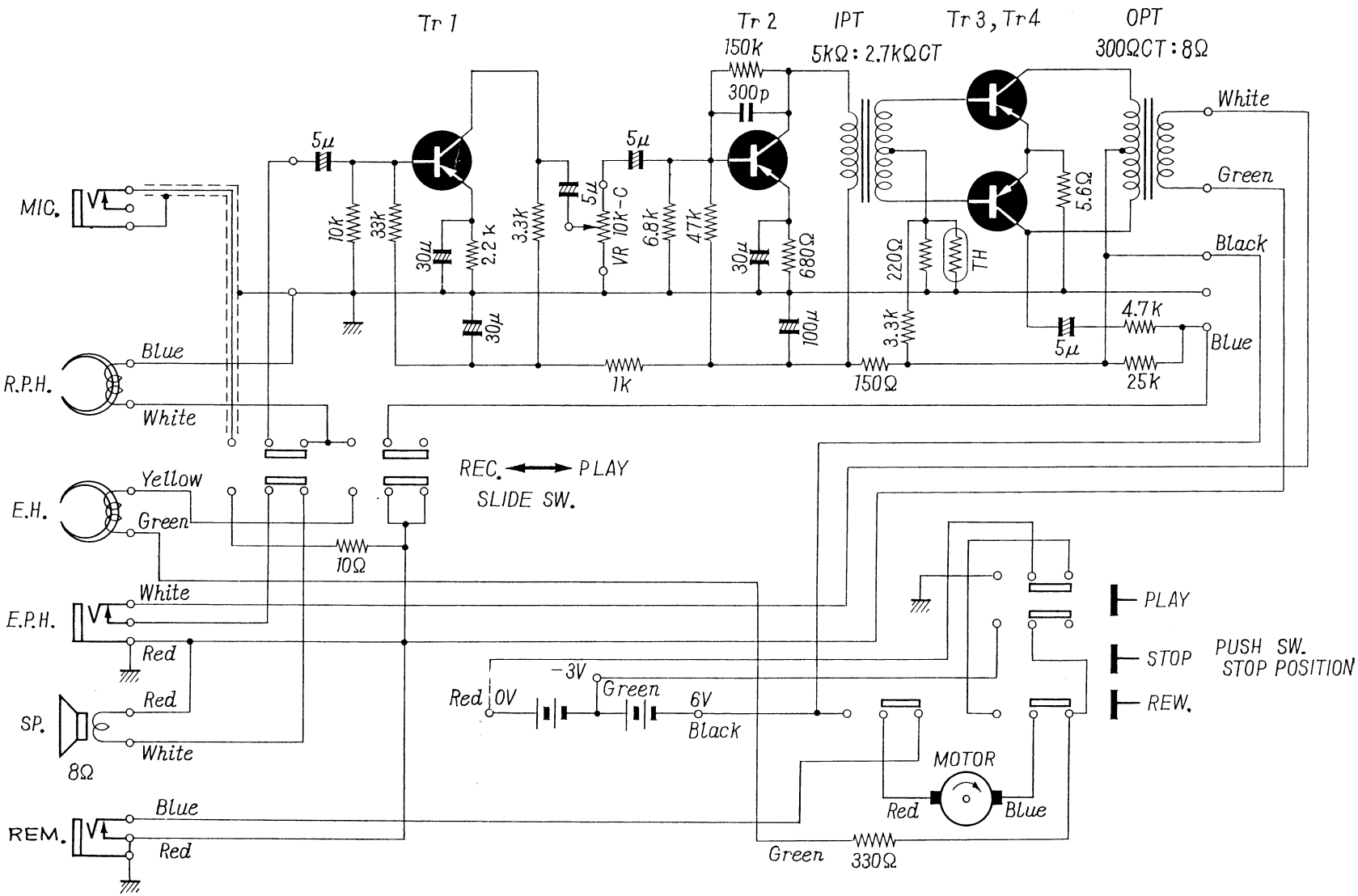


Fig. 6

SPECIFICATION

Type :	Reel-drive system
Amplifier :	4 transistors
Tape speed :	3.45～3.95 i.p.s.
Recording System :	DC bias
Erasing System :	DC erase
Recording Track :	Dual-track
Output :	Maximum 150mW
Speaker :	2" dia. PDM. speaker
Power Source :	DC 6V, Size "AA", Eveready No. 1015 JIS UM-3(1.5V)×4
Recording time :	15～20min.
Dimensions :	6"×4"×2⅛"
Weight :	1-⅜ lbs.


Tr 1
Tr 2
IPT
5kΩ : 2.7kΩCT
Tr 3, Tr 4
OPT
300ΩCT : 8Ω
150k
300p
5μ
10k
33k
3.3k
VR 10k-C
6.8k
47k
30μ
2.2k
680Ω
100μ
220Ω
TH
5.6Ω
4.7k
25k
1k
150Ω
White
Green
Black
Blue
MIC.
R.P.H.
E.H.
E.P.H.
SP.
8Ω
REM.
Yellow
Red
10Ω
REC. ⟷ PLAY
SLIDE SW.
−3V
0V
6V
MOTOR
PLAY
STOP
REW.
PUSH SW.
STOP POSITION
330Ω

PARTS LIST

PART NUMBER	DESCRIPTON	REMARKS
T-5301	Variable Resistor	16ϕ, 10KΩ(C), S-free
T-5303	Slide Switch	4 Circuits, 2 Contacts
T-5304	Head Ass'y	
	Recording/Playback	Z=2.2KΩ, Shielded Front
	Erasure	Z=320Ω, 2.5mA, Over 55dB
T-5305	OPT	Lead Wire, Pin-type. 300ΩCT : 8Ω, Red
T-5306	IPT	Lead Wire, Pin-type, 5KΩ : 2.7KΩCT, Blue
T-5307	Printed Board	
T-5308	Speaker	2inch., O. 1W, 8Ω
T-5309	Jack	3.5 ϕ
T-5310	Jack, Insulated Type	〃
T-5311	Wire Kit	
T-5312	Single-core Shielded Wire	See Wire Kit, T-5311
T-5313	Jack	2.5 ϕ
2SB186	Transistor	PG=37-39dB, Low Noise
2SB187	〃	30mAβ=100-125
SDT-20	Thermister	200Ω±15%
T-5314	Shielded Wire	See Wire Kit
VK-5.6-1/10	Fixed Resistor	RD-1/10LD-5.6-K
XK-10-¼	〃 〃	RD-¼S-10-K
VK-150-1/10	〃 〃	RD-1/10LV-150-K
VJ-220-1/10	〃 〃	RD-1/10LV-220-J
ZK-330-1/8	〃 〃	RD-1/8L-330-K
VK-680-1/10	〃 〃	RD-1/10LV-680-K
VK-1K-1/10	〃 〃	〃 〃 1K-K
VK-2.2K-1/10	〃 〃	〃 〃 2.2K-K
VK-3.3K-1/10	〃 〃	〃 〃 3.3K-K
VJ-3.3K-1/10	〃 〃	〃 〃 3.3K-J
VK-4.7K1/10	〃 〃	〃 〃 4.7K-K
VK-6.8K-1/10	〃 〃	〃 〃 6.8K-K
VK-10K-1/10	〃 〃	〃 〃 10K-K
VJ25K-1/10	〃 〃	〃 〃 25K-J
VK-33K-1/10	〃 〃	〃 〃 33K-K
AB-300P	Titanium Capacitor	300pF, 50VW
BD-5	Electrolytic Capacitor	5/μF, 6V Vertical

PART NUMBER	DESCRIPTION	REMARKS
BE-30	Electrolytic Capacitor	30/μF, 3V, Vertical
BD-30	〃	〃 6V, 〃
BD-100	〃	100/μF, 6V, 〃
BO-7.5-2	Insulated wire	Black, 7.5cm.
B4-3-2	〃	Yellow, 3cm.
B4-23-2	〃	〃 23cm.
B6-5-2	〃	Blue, 5cm.
B6-8-2	〃	〃 8cm.
B9-24-2	〃	White, 24cm.
VK-47K-1/10	Fixed Resistor	RD-1/10LV-47K-K
VK-150K-1/10	〃 〃	〃 〃 150K-K
AB-300P	Titanium Capacitor	300pF, 50WV
BD-5	Electrolytic Capacitor	5/μF, 6V, Vertical
BE-30	〃 〃	30/μF, 3V, 〃
BD-30	〃 〃	〃 6V, 〃
BD-100	〃 〃	100/μF, 6V, 〃
T-5305	OPT	300Ω CT : 8Ω, Red
T-5306	IPT	5KΩ : 2.7KΩ CT, Blue
T-5307	Printed Board	
2SB186	Transistor	PG 37-39dB
2SB187	〃	30mAβ=100-125
SPT-20	Thermister	200Ω±15%
VK-5.6-1/10	Resistor	RD-1/10LV-5.6-K
VK-150-1/10	〃	〃 〃 150-K
VJ-220-1/10	〃	〃 〃 220-J
VK-680-1/10	〃	〃 〃 680-K
VK-1K-1/10	〃	〃 〃 1K-K
VK-2.2K-1/10	〃	〃 〃 2.2K-K
VK-3.3K-1/10	〃	〃 〃 3.3K-K
VJ-3.3K-1/10	〃	〃 〃 3.3K-J
VK-4.7K-1/10	〃	〃 〃 4.7K-K
VK-6.8K-1/10	〃	〃 〃 6.8K-K
VK-10K-1/10	〃	〃 〃 10K-K
VJ-25K-1/10	〃	〃 〃 25K-J
VK-33K-1/10	〃	〃 〃 33K-K
VK-47K-1/10	〃	〃 〃 47K-K
VK-150K-1/10	〃	〃 〃 150K-K

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